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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,826	09/05/2003	Scott C. Benson	4299C3	8782

22896 7590 02/28/2006
MILA KASAN, PATENT DEPT.
APPLIED BIOSYSTEMS
850 LINCOLN CENTRE DRIVE
FOSTER CITY, CA 94404

EXAMINER

FREDMAN, JEFFREY NORMAN

ART UNIT PAPER NUMBER

1637

DATE MAILED: 02/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/656,826	Applicant(s) BENSON ET AL.	
	Examiner Jeffrey Fredman	Art Unit 1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

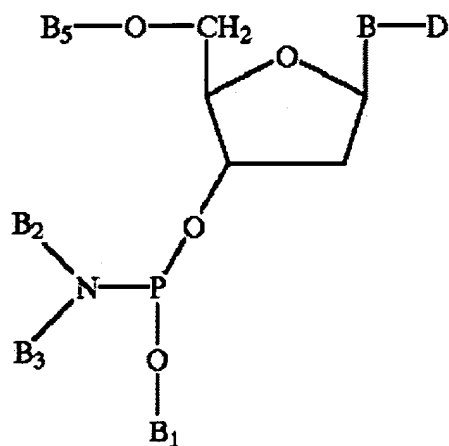
- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/5/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

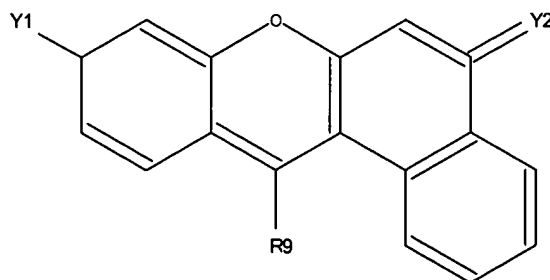
Double Patenting

1. Claims 42-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 22 of U.S. Patent No. 6,020,481 in view of Grossman et al (U.S. Patent 5,514,543).

Claim 22 of U.S. Patent 6,020,481, teaches compounds which are phosphoramidites with asymmetric benzoxanthene dye labeling reagents (claim 1, line 1) comprising the structure



Where D is the structure of shown in claim 1 (column 29, lines 5-15) of:



Claim 22 differs from claims 42-46 solely in the B₅ moiety. In claim 22, B₅ is an "acid cleavable hydroxyl protecting group" but the specific species of "Triphenylmethyl radical" is not claimed.

Grossman teaches "To the 5' hydroxyl of the CPG-supported oligonucleotide was added N--MMT--C.sub.6 Amino Modifier using standard phosphoramidite chemistry. N--MMT--C.sub.6 Amino Modifier is a monomethoxytrityl-protected amino linked phosphoramidite which is commercially available from Clontech Laboratories, Palo Alto, Calif."(see column 27, lines 55-62).

With regard to claims 43-46, the monomethoxytrityl group of Grossman meets the limitations since monomethoxytrityl has a lower alkoxy electron donating substituent and is a triphenylmethyl radical.

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use the protecting group of Grossman in the phosphoramidite of claim 22 of U.S. Patent 6,020,481 since Grossman teaches that this is a standard protecting group used in phosphoramidite chemistry. An ordinary practitioner would have been motivated to use standard protecting groups in order to permit the use of standard protocols in synthesis of oligonucleotides and permit standard synthesis apparatus in order to minimize cost and maximize utility for the largest number of possible users.

2. Claims 42-46 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 6,617,445 in view of Grossman et al (U.S. Patent 5,514,543).

Claims 1-8 of U.S. Patent No. 6,617,445 teach specific asymmetric benzoxanthene dye labeling reagents which species anticipate the more generic dyes in the current claims

Claims 1-8 of U.S. Patent No. 6,617,445 do not teach addition of the labels to phosphoramidites nor the specific protecting groups.

Grossman teaches the specific protecting groups, noting "To the 5' hydroxyl of the CPG-supported oligonucleotide was added N--MMT--C.sub.6 Amino Modifier using standard phosphoramidite chemistry. N--MMT--C.sub.6 Amino Modifier is a monomethoxytrityl-protected amino linked phosphoramidite which is commercially available from Clontech Laboratories, Palo Alto, Calif."(see column 27, lines 55-62).

Grossman also expressly teaches fluorescent detection of DNA probes (see column 13, lines 45-67).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to combine the protecting group and phosphoramidites of Grossman with the labels of Claims 1-8 of U.S. Patent No. 6,617,445 since Grossman teaches the use labels and that the phosphoramidite has this standard protecting group used in phosphoramidite chemistry. An ordinary practitioner would have been motivated to use labels since Grossman teaches that fluorescent labels are a preferable reporter for direct detection (see column 13, lines 45-55) and since Grossman teaches

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standard protecting groups in order to permit the use of standard protocols in synthesis of oligonucleotides and permit standard synthesis apparatus in order to minimize cost and maximize utility for the largest number of possible users.

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey Fredman whose telephone number is (571)272-0742. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571)272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jeffrey Fredman
Primary Examiner
Art Unit 1637

2/11/06